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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/656,106	09/06/2000	Masaya Wajima	36856.345	9145

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EXAMINER

GONZALEZ, JULIO C

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 08/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/656,106

Applicant(s)

WAJIMA ET AL.

Examiner

Julio C. Gonzalez

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-19 is/are allowed.
- 6) ☒ Claim(s) 1 and 3-13 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 25.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 3-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaida (US Patent 5,684,436) in view of Kaida et al (US Patent 5,627,425) and Okamura (US Patent 5,892,415) and Tanaka (JP406224681A).

Kaida discloses a chip electronic component, a piezoelectric element 32, a first case 23 and second case 25, both with recesses (see figure 29), a wide portion 33a and narrow portion 33d and side portion electrode (see figures 37, 38).

Moreover, there are external electrodes extending on the side (see figure 30).

However, Kaida does not disclose explicitly having printed circuit board and using conductive bond.

On the other hand, Okamura discloses for the purpose of providing a resonator, which can be easily downsized and manufactured, an electronic component mounted on a printed circuit board via a conductive bond (column 7, lines 11-16). Moreover, Okamura discloses a plurality of external electrodes 7, 8

that extend over the lower and side surface (see figure 22). Also, Okamura teaches that electrodes may have different shapes such as triangular or circular (column 5, lines 22, 23).

However, neither Kaida nor Okamura disclose explicitly that the width of the external electrodes may be smaller than the width of other electrodes.

On the other hand, Kaida et al (US Patent 5,627,425) discloses for the purpose of providing an energy trap device that can prevent leakage to the exterior regardless of the vibration source, a pair of side surfaces, external electrodes 117, 118 (see figure 38). Also, a piezoelectric element 41 is disclosed, a first case 115, a second case 116 with recesses 113, 114. Moreover, the width of the electrodes portion on the lower surface of the electronic component element is larger than the width of the electrodes portion formed on the side surface of the electronic component element (see figure 38, 39).

However, neither Kaida, Kaida et al nor Okamura disclose explicitly that the external electrodes may have a wide and narrow portion.

On the other hand, Tanaka discloses for the purpose of keeping a connection reliability to resolve a package defect that a resonator 1 may have external electrodes 27 and 37, each with a wide and narrow portion (see figures 4, 5 & see also the translated portion adjunct to the Japanese patent).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a chip electronic device as disclosed by Kaida and to modify the invention by using a printed circuit board for the purpose of providing a resonator, which can be easily downsized and manufactured as disclosed by Okamura and to explicitly disclose electrodes larger than others for the purpose of providing an energy trap device that can prevent leakage to the exterior regardless of the vibration source as disclosed by Kaida et al and to explicitly have an external electrode with wide/narrow portions for the purpose of keeping a connection reliability to resolve a package defect as disclosed by Tanaka.

Allowable Subject Matter

3. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In particular, the allowed limitations of claim 2 are having a relationship $L_1 < L_2 < L_3$ is satisfied where L_1 is the width of the external electrodes portion located on at least one side of the electric component element, L_2 is the width of the narrow portion and L_3 is the width of the wide portion.

4. Claims 14-19 are allowed, in particular the limitations that overcame the prior art, in combination with the rest of the limitations of claim 14 are that each portion of the external electrodes are provided on the lower surface of the body of the chip electronic component, which is arranged to have an uniform width from one longitudinal end to the other, and satisfy the relation $L1 < L3$, where $L3$ is the width of each portion of the external electrodes provided on the lower surface of the body of the chip electronic component and $L1$ is the width of each portion of the external electrodes provided on the at least one side surface of the body of the chip electronic component, each of the widths $L1$ and $L3$ being defined as a dimension of the external electrodes measured in a longitudinal direction of the body of the chip electronic component.

Response to Arguments

5. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

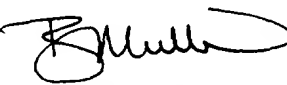
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio C. Gonzalez whose telephone number is (703) 305-1563. The examiner can normally be reached on M-F (8AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Jcg


BURTON S. MULLINS
PRIMARY EXAMINER